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U.S. DEPARTMENT OF AGRICULTURE
ECONOMIC RESEARCH SERVICE

SEP 11 1967

COMMERCIAL DAIRY FARMS

COSTS and RETURNS



**Commercial
Dairy
Farms**

**Northeast and
Midwest**

1966

Table 1.--Organization, production, income, and related data, commercial dairy farms, Central Northeast and Midwest, in the aggregate, 1965 and 1966

Item	Unit	1965	1966 ^{1/}	Item	Unit	1965	1966 ^{1/}
Land in farm.....	Acre	205	208	Total cash receipts.....	Dollar	12,554	14,759
Cropland harvested.....	do.	98	102	Value of perquisites.....	do.	1,039	1,137
Corn for grain.....	do.	14.9	16.3	Change in inventory of crops and	do.	-33	506
Corn for silage.....	do.	13.4	12.9	livestock.....	do.		
Small grains.....	do.	19.8	20.9	Gross farm income.....	do.	13,560	16,402
Hay.....	do.	49.4	50.7	Total cash expenditures.....	do.	9,405	9,967
Crop yields per harvested acre:				Inventory adjustment, machinery and	do.	-276	-354
Corn for grain.....	Bushel	69.7	79.6	Total operating expenses.....	do.	9,129	9,613
Corn for silage.....	Ton	11.2	12.6	Net cash farm income.....	do.	3,149	4,792
Oats.....	Bushel	57.9	52.8	Net farm income.....	do.	4,431	6,789
Hay.....	Ton	2.03	2.29	Index numbers (1957-59=100):			
All cattle on farm, Jan. 1.....	Number	44.8	44.3	Net farm production.....	---	123	130
Cows and heifers, 2 years	do.	28.3	28.2	Total milk production.....	---	143	144
old and over.....	do.			Crop yields per acre.....	---	107	116
Average number of cows milked.....	do.	26.5	26.4	Total cost per unit of production..	---	110	109
Milk production per cow.....	Pound	9,410	9,500	Prices received for products sold..	---	103	119
Total farm capital, Jan. 1.....	Dollar	51,750	54,970	Prices paid, including wages to	---	110	114
Land and buildings.....	do.	31,620	33,340	hired labor.....	---		
Machinery and equipment.....	do.	7,900	8,320				
Livestock.....	do.	8,010	8,910				
Crops.....	do.	4,220	4,400				
Total labor used.....	Hour	4,370	4,160				
Hired.....	do.	480	460				

^{1/} Preliminary.

COSTS AND RETURNS COMMERCIAL DAIRY FARMS NORTHEAST AND MIDWEST, 1966

Erling Hole and Rosa J. Cox¹

SUMMARY

Net farm incomes (for definition see note at end of table 4) of typical dairy farms in Central Northeastern and Midwestern States rose sharply in 1966:

	<u>1964</u>	<u>1965</u>	<u>1966</u>	Percentage change	
				<u>1964 to 1965</u>	<u>1965 to 1966</u>
Central Northeast.....	\$4,264	\$4,378	\$6,531	3	49
Eastern Wisconsin, grade A	6,731	6,104	9,650	-9	58
Eastern Wisconsin, grade B	3,493	2,948	4,927	-16	67
Western Wisconsin, grade B.....	2,939	4,454	6,707	52	51
Southeastern Minnesota, dairy-hog	3,815	5,274	8,004	38	52

The main factor in these gains was the largest increase in milk prices since the early 1950's (fig. 1), partly reflecting higher support prices for manufactured milk. Prices received for products sold were 16 percent above 1965 (table 1).

Net farm production rose 7 percent in 1966, chiefly due to 8 percent higher crop yields. Milk production rose only 1 percent. These gains were achieved through greater efficiency, since production costs per unit dropped 1 percent.

Most of the 1966 increase in cash expenses was due to higher average prices for production items, although more farm machinery was bought. Tables 2-4 present data for 1966 with 1965 comparisons for dairy farms in the 5 areas studied; table 2 shows organization and production; table 3 lists receipts and expenses; and table 4 gives income and related data.

Principal findings in each for the 5 study areas are discussed on pages 2 to 5.

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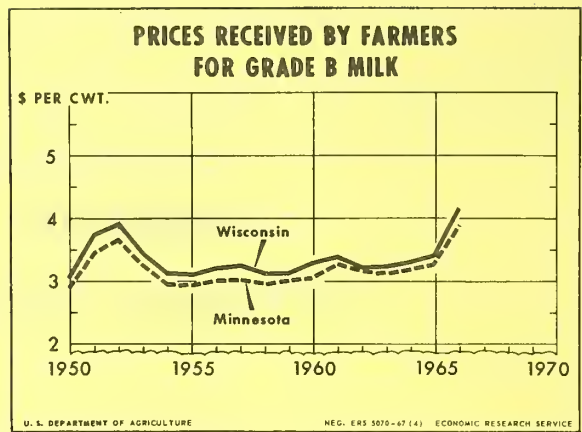
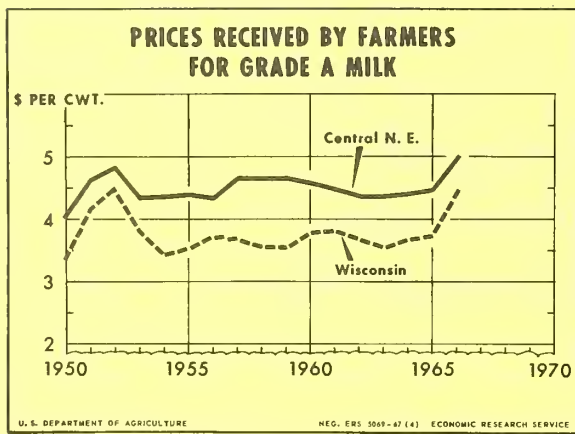


Figure 1.--Support price on manufacturing milk, average fat content basis, was increased in 1966 from \$3.25 per hundredweight to \$3.50 on April 1, and to \$4.00 on July 1.

Central Northeast

Net farm incomes on typical Central Northeast dairy farms averaged \$6,531 per farm in 1966 (fig. 2). An 18-percent increase in gross farm income was accompanied by a 6-percent increase in operating expense. Total cash receipts were 14 percent higher, equaling the increase in milk sales.

Production of milk per cow continued to increase in 1966, but at a lower rate--about 1 percent--than in recent years. The rate of increase in number of cows milked changed little from 1965. As a result, production of milk per farm increased only 2 percent, a rate lower than that of recent years. Crop production in 1966 featured record-high yields of corn for silage, higher hay yields, but lower oat yields. Pasture conditions for the season of 1966 were consistently better than in 1965.

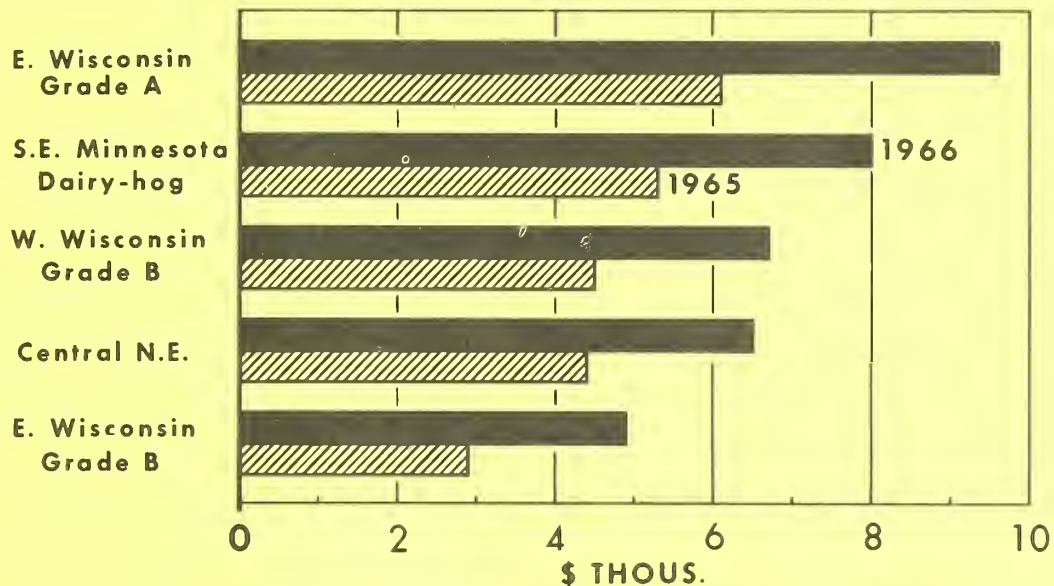
The average price received for milk in 1966 was \$4.98 per hundred-

weight, up 51 cents from 1965. The 1966 price has been exceeded only by the 1948 price, \$5.29. For 13 years, from 1953 through 1965, the price of milk had ranged from a high of \$4.66 (1957 and 1959) to a low of \$4.34 (1956). Prices received in 1966 for cull cows and calves sold were nearly one-fourth higher than in 1965.

The 6-percent higher operating expense--\$12,440 per farm in 1966--compared with 1965 chiefly reflected higher prices of production items. Purchases of machinery increased 7 percent. Feed prices increased 4 percent, and lower production of oats led to 8 percent larger feed expenditures than a year earlier. Operating expense per unit of production was somewhat larger than in 1965 and averaged 14 percent greater than in 1957-59.

The value of farm capital averaged \$50,400 per farm on Jan. 1, 1966. The increase of recent years continued, chiefly because of higher

NET FARM INCOME: COMMERCIAL DAIRY FARMS



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Figure 2

land values per acre and higher investments in livestock. Based on the number of young cattle on farms at the end of 1966, the rate of increase in number of cows milked is likely to continue at about the same rate in 1967 and to accelerate in 1968.

Eastern Wisconsin, Grade A

Net farm incomes on typical eastern Wisconsin grade A dairy farms averaged \$9,650 per farm in 1966. A 24-percent increase in gross farm income from 1965 to 1966 was accompanied by about 5 percent higher operating expense. Total cash receipts were 17 percent higher, about the same increase as for milk sales.

Production per cow was less than 1 percent greater in 1966 than in 1965. Because the number of cows

dropped, milk production per farm declined slightly. The average price received for milk sold in 1966 was \$4.45 per hundredweight, up 71 cents from 1965. Prices received for milk for the 13 years (1953-65) varied from a high of \$3.82 (1953 and 1961) to a low of \$3.44 (1954).

Net farm production was 6 percent greater in 1966 than in 1965 because of larger crop output. Record yields per acre of corn for grain and corn for silage were harvested. Hay yields in 1966 were also higher than in 1965, but yields per acre of oats and minor crops declined.

Total cash expenditures increased 6 percent, with purchases of farm machinery increasing the most--11 percent. In 1966, prices paid for production items were 16 percent higher than in 1957-59. Prices received were 24 percent higher, with

products other than milk increasing the most.

Value of farm capital rose \$6,170 in 1965 to \$81,640 on Jan. 1, 1966, chiefly because of a 6-percent increase in the value of land per acre.

Eastern Wisconsin, Grade B

Net farm incomes on typical Eastern Wisconsin grade B dairy farms averaged \$4,927 per farm in 1966. Gross farm income increased 24 percent from 1965 to 1966, and operating expense was up 5 percent. Total cash receipts increased 17 percent. Receipts from sale of milk increased nearly 20 percent, and receipts from other sources increased 12 percent.

The average price received for manufacturing milk in 1966 was \$4.13 per hundredweight, 72 cents higher than in 1965. The price received for milk during the 13-year period (1953-65) ranged from a high of \$3.44 (1953) to a low of \$3.10 (1955).

Production of milk decreased slightly, as the small increase in production per cow was offset by fewer cows. Farm production in 1966 was 19 percent higher than in 1957-59 and 6 percent above 1965, chiefly because of record yields of corn.

Total cash expenditures increased about 6 percent from 1965 to 1966. Purchases of farm machinery showed the largest percentage increase--about 14 percent.

Prices received in 1966 were 28 percent higher than in 1957-59, whereas prices paid were 16 percent higher.

The value of farm capital increased to a record high of \$55,140 per farm on Jan. 1, 1966. The increase--\$4,340--from a year earlier was chiefly a result of a 7-percent higher value of land per acre.

Western Wisconsin, Grade B

Net farm income, on typical western Wisconsin grade B dairy farms averaged \$6,707 in 1966. A 22-percent increase in gross farm income from 1965 to 1966 was accompanied by a 2-percent increase in operating expense. Total cash receipts were also about 24 percent higher. Sales of milk and livestock increased 21 and 22 percent, respectively. Sales of crops were 4 times those of a year earlier. The prices received for manufacturing milk on these farms and price movements, 1953-65, were identical to those described for eastern Wisconsin, grade B.

Farm production in 1966 was one-fourth greater than in 1957-59 and 5 percent higher than in 1965. Milk production in 1966 was nearly as large as in 1965, as a small drop in number of cows milked and a minor increase in output per cow almost offset one another. The chief factor causing an increase in farm production was a record yield of corn.

Total cash expenditures were only 4 percent greater in 1966 than in 1965. Purchases of feed declined from those of 1965 (which were influenced by the drought of 1964 and early 1965). Purchases of farm machinery increased most--about 17 percent.

The value of farm capital increased to \$41,680 on Jan. 1, 1966,

as a result of moderate increases in all categories. The value of land per acre increased less than 2 percent.

Southeastern Minnesota, Dairy-Hog

Net farm incomes on typical southeastern Minnesota dairy-hog farms producing manufacturing milk averaged \$8,004 per farm in 1966. A 25-percent increase in gross farm income from 1965 to 1966 was accompanied by a 6-percent increase in operating expense. Total cash receipts were 23 percent higher, with 16 percent higher milk sales and 18-percent higher livestock sales. Crop sales in 1966 were almost double those of 1965. The average price received for milk in 1966 was \$3.86 per hundredweight, 59 cents higher than in 1965. In the 13-year period, 1953-65, the price of milk ranged from a high of \$3.27 (1961 and 1965) to a low of \$2.94 (1955). Production of milk in 1966 was nearly 2 percent smaller than

in 1965, as a reduction in number of cows milked outweighed a slight increase in production per cow.

Farm production on these farms in 1966 was 32 percent larger than in 1957-59 and 12 percent higher than in 1965. With total farmland operated 19 percent greater, crops were chiefly responsible for increased farm production. Yields per acre of corn and hay were record high in 1966, but oat yields declined.

Total cash expenditures increased 7 percent in 1966. Outlays for feed purchased increased about 10 percent, as concentrates fed per hundredweight of milk produced increased. Purchases of machinery were about 13 percent larger than in 1965.

Value of farm capital increased about 5 percent from Jan. 1, 1965, to the same date in 1966. The value of livestock increased most--18 percent. The value of land per acre increased less than 1 percent.

Table 2.--Organization and production, commercial dairy farms, specified locations, 1965 and 1966

Item	Unit	Central Northeast dairy		Eastern Wisconsin dairy		Western Wisconsin dairy, Grade B		Southeastern Minnesota dairy-hog	
		Grade A		Grade B		Grade B			
		1965	1966 ^{1/}	1965	1966 ^{1/}	1965	1966 ^{1/}	1965	1966 ^{1/}
Land in farm.....	Acre	247	251	184	188	152	155	183	187
Cropland harvested.....	do.	91	94	125	130	92	95	112	117
Crops harvested:									
Corn for grain.....	do.	---	---	25.9	27.5	15.4	16.2	18.9	21.0
Corn for silage.....	do.	14.2	14.5	20.1	20.0	12.0	12.0	10.6	9.4
Small grains.....	do.	11.8	12.6	26.5	27.0	25.0	25.5	23.3	25.2
Hay.....	do.	65.0	67.0	45.6	47.7	38.5	40.0	41.6	41.6
Crop yields per harvested acre:									
Corn for grain.....	Bushel	---	---	78.1	86.7	70.0	77.7	74.7	79.8
Corn for silage.....	Ton	11.9	13.1	11.3	12.4	10.0	11.0	11.9	13.5
Oats.....	Bushel	56.0	50.0	63.0	57.6	58.2	53.2	61.2	53.9
Hay.....	Ton	1.7	2.0	2.4	2.8	2.0	2.3	2.3	2.5
Cattle on farm, Jan. 1:									
All cattle.....	Number	48.9	49.0	57.0	55.5	35.3	34.2	45.1	44.5
Cows and heifers, 2 years old and over.....	do.	33.5	33.8	34.2	33.3	22.4	21.8	25.4	25.3
Milk production per cow.....	Pound	9,620	9,750	10,710	10,800	9,120	9,200	8,810	8,880
Total farm capital, Jan. 1.....	Dollar	48,000	50,400	75,470	81,640	50,800	55,140	39,140	41,680
Land and buildings.....	do.	27,200	28,400	43,970	47,840	32,530	35,500	23,170	24,040
Machinery and equipment.....	do.	8,600	9,000	13,530	14,330	6,710	7,130	4,570	4,860
Livestock.....	do.	9,200	10,100	11,460	12,610	6,030	6,660	7,300	8,170
Crops.....	do.	3,000	2,900	6,510	6,860	5,530	5,850	4,100	4,610
Total labor used.....	Hour	4,630	4,470	4,700	4,430	3,850	3,620	4,360	4,120
Hired.....	do.	810	780	470	440	90	90	290	270

1/ Preliminary.

Table 3.--Receipts and expenditures, commercial dairy farms, specified locations, 1965 and 1966

Item	Central Northeast dairy		Eastern Wisconsin dairy		Wisconsin dairy, Grade B		Southeastern Minnesota dairy-hog	
	Dollars		Dollars		Dollars		Dollars	
	1965	1966 ^{1/}	1965	1966 ^{1/}	1965	1966 ^{1/}	1965	1966 ^{1/}
Total cash receipts.....	15,008	17,190	16,269	19,000	8,812	10,324	9,690	11,742
Dairy products.....	13,262	15,094	11,847	13,882	6,036	7,218	6,601	7,418
Cattle and calves.....	1,462	1,775	2,358	2,797	1,246	1,479	1,555	1,418
Hogs.....	---	---	1,065	1,173	788	895	791	1,727
Poultry and eggs.....	214	251	---	---	221	258	162	383
Crops.....	---	---	334	522	172	145	128	2,214
Other, including Government payments.....	70	70	665	626	349	329	453	664
Value of perquisites.....	1,067	1,153	1,231	1,356	1,148	1,284	903	880
Change in inventory of crops and livestock.....	25	628	-495	737	-241	414	103	177
Gross farm income.....	16,100	18,971	17,005	21,093	9,719	12,022	10,696	13,068
Total cash expenditures.....	12,000	12,746	11,616	12,279	6,934	7,346	6,349	7,848
Feed purchased.....	4,610	4,965	1,469	1,553	912	966	980	887
Livestock expense.....	644	683	806	826	556	570	503	496
Fertilizer and lime.....	504	523	554	575	348	358	371	424
Other crop expense.....	368	402	656	668	518	530	485	567
Machinery.....	3,257	3,463	4,344	4,710	2,618	2,844	2,301	2,502
Farm buildings and fences.....	605	625	1,550	1,635	706	750	501	555
Labor hired.....	813	853	517	518	102	102	297	299
Taxes.....	931	963	1,361	1,426	886	928	697	722
Other.....	268	269	359	368	288	298	214	252
Inventory adjustment, machinery and buildings.....	-278	-306	-715	-836	-163	-251	-107	-323
Total operating expenses.....	11,722	12,440	10,901	11,443	6,771	7,095	6,242	7,525

^{1/} Preliminary.

Table 4.--Income and related data, commercial dairy farms, specified locations, 1965 and 1966

Item	Central Northeast dairy		Eastern Wisconsin dairy		Western Wisconsin dairy, Grade B		Southeastern Minnesota dairy-hog	
	Grade A		Grade B		Grade B			
	1965	1966 ^{1/}	1965	1966 ^{1/}	1965	1966 ^{1/}	1965	1966 ^{1/}
	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars	Dollars
Net farm income.....	4,378	6,531	6,104	9,650	2,948	4,927	4,454	6,707
Charge for capital at current interest rates ^{2/}	2,760	2,898	4,151	4,491	2,794	3,033	2,153	2,292
Return to operator and family labor.....	1,618	3,633	1,953	5,159	154	1,894	2,301	4,415
Return per hour.....	.42	.98	.46	1.29	.04	.54	.57	1.15
Charge for capital at 4.1 percent interest ^{3/}	1,968	2,066	3,094	3,347	2,083	2,261	1,605	1,709
Return to operator and family labor.....	2,410	4,465	3,010	6,303	865	2,666	2,849	4,998
Return per hour.....	.63	1.21	.71	1.58	.23	.75	.70	1.30
Index numbers (1957-59 = 100)								
Net farm production.....	131	137	121	128	113	119	120	125
Total milk production.....	154	158	140	138	131	129	141	131
Crop yields per acre.....	102	110	105	114	104	110	110	114
Total cost per unit of production.....	107	107	114	112	116	115	109	108
Prices received for products sold.....	97	108	103	124	106	128	106	127
Prices paid, including wages to hired labor....	107	111	113	116	112	116	112	116

^{1/} Preliminary.

^{2/} Represents the current interest rate in effect on Jan. 1, for new loans by the Federal Land Banks in the farmers' respective areas.

^{3/} Represents the average rate paid by farmers on outstanding debts held by the Federal Land Banks in the United States from 1940 to 1960.

Note: Information presented here is on an owner-operator basis primarily for comparability between types of farms. Net farm income is the return to operator and unpaid members of the family for their labor and management on the farm and return to total capital. No allowance has been made for payment of rent, interest, or mortgage.

FARM COSTS STUDIES

This report is part of a continuing nationwide study of costs and returns on commercial farms and ranches by type and size in some of the important farming regions of the United States. The study is conducted under the general supervision of Wylie D. Godsell, Farm Production Economics Division, Economic Research Service. Objectives, methodology, procedure, and terms are uniform for all areas covered in the study.

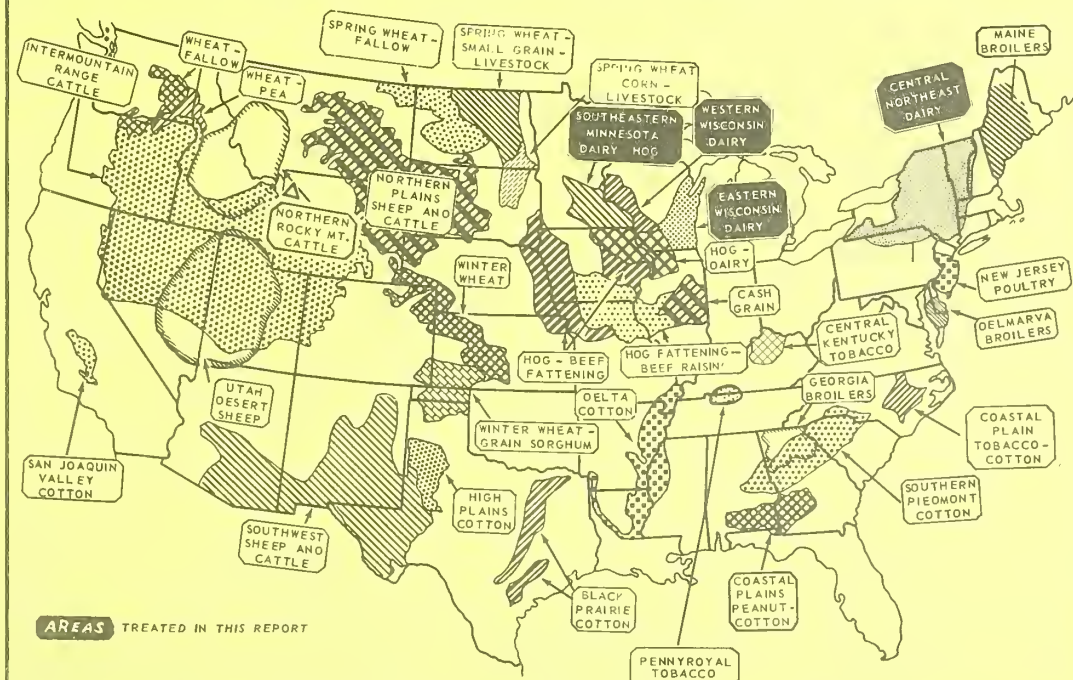
The 1966 costs and returns studies have been conducted on the following:

Dairy Farms, Northeast and Midwest
 Corn Belt Farms
 Egg-Producing Farms, New Jersey
 Broiler Farms, Maine, Delmarva, and Georgia
 Cotton Farms
 Tobacco Farms, Coastal Plain, North Carolina
 Tobacco-Livestock Farms, Bluegrass Area, Kentucky and Pennyroyal Area, Kentucky-Tennessee
 Wheat Farms, Plains and Pacific Northwest
 Western Livestock Ranches

Summary statistics for all types of farms in the study are presented in a report, revised annually. The latest such report was published in 1966 and is titled: "Farm Costs and Returns, Commercial Farms, by Type, Size, and Location," Agriculture Information Bulletin No. 230, Revised 1966.

Information on the studies can be obtained from Farm Production Economics Division, Economic Research Service, U.S. Department of Agriculture, Washington, D.C. 20250.

LOCATION OF TYPES OF FARMS STUDIED



UNITED STATES DEPARTMENT OF AGRICULTURE
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POSTAGE AND FEES PAID
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